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	7.								Hsp60 Chaperone Mac gent Replication; J. Viro			1998).	
	9.	Caug	ghey, B	Вугоп а	and Ra	Race, R	Richard E.; Po		on of Scrapie-Associated			ongo Red	; J.
	10.	Caug	ghey, B	•	and Ra	Raymor		•	olyanion Inhibition of Sc	crapie-Assr	ociated PrP Ac	cumulatio	n in
	11.	Cha,	J-H. J.	J.; ct al.	l.; Alte	tered ne		ter receptor ex	xpression in transgenic r	mouse mod	lels of Hunting	gton's dise	ase; Phil.
	12.	Chai,	Y. et	t al.; Ev	videnc	ce for	proteasome in	nvolvement in	n polyglutamine disease: tion in vitro; Hum. Mol.				in
	13.	Choi-	i-Lundt		D. L. c				otected from Degenerati				ce
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Am	2	17.	Cummings, C. J. et al.; Mutation of the E6-AP Ubiquitin Ligase Reduces Nuclear Inclusion Frequency While Accelerating											celerating	
)	-	18.	Déglo	Polyglutamine-Induced Pathology in SCA1 Mice; Neuron X:879-892 (1999). Déglon, N.; Central Nervous System Delivery of Recombinant Ciliary Neurotrophic Factor by Polymer Encapsulated											
-	+	19.	Dorar	1 S. E	. ct a).	; Gen	e Expressi	ion from R	tecombinant	35-2146 (1996). Viral Vectors in t	he Central Nerv	ous System aft	er Blood-l	Brain	
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	+	21.	Hunti	ngton	's dis	ease;	Nature 38	6: 395 -399	(1997).	Inclusions and th			_		
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		22.	Gimé Res. 4	•				vention of	Motoneuror	Death by Adeno	virus-Mediated	Neurotrophic I	actors; J.	Neurosci.	
		23.								nipulation of Ade furray, Ed.; The I				Biology,	
		24.	Haase Medic					murine m	otor neuron o	lisease using aden	oviral vectors f	or neurotrophic	: factors; /	Vatur e	
		25.								dation (SPAR): a					
	_	26.					d Hartl, Fr (1993).	ranz-Ulric	h; Molecular	Chaperone Funct	ions of Heat-Sh	ock Proteins; A	innu. Rev. 		
		27.					ect intracer NeuroRep			n adenoviral vect	or expressing ty	rosine hydroxy	lase in a r	at model	
		28.	Kayto 274:3					Stephen T	.; Aberrant P	rotein Deposition	and Neurologic	cal Disease; J.	Biol. Chen	n.	
		29.	Kazer 287:1					zer, Scym	our; Genetic	Suppression of Po	olyglutamine To	oxicity in <i>Drose</i>	ophila, Sc	ience	
V		30.	Kobay Cells	Kobayashi, Y. et al.; Chaperones Hsp70 and Hsp40 Suppress Aggregate Formation and Apoptosis in Cultured Neuronal Cells Expressing Truncated Androgen Receptor Protein with Expanded Polyglutamine Tract; J. Biol. Chem. 275:8772-8778 (2000). Kojima, H. et al.; Construction and Characterization of Adenoviral Vector Expressing Biologically Active Brain-Derived											
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

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1		49.	Supatta Sci. US						ms by branci	ned polyamines a	nd implications t	or therapeutics	; Proc. N	arl. Acad.	
		5 0.	Tagliav 276:11					ness of Anth	racycline Ag	ainst Experiment	a) Prion Disease	in Syrian Ham	sters; Scie	ence	
		51.	Tran, P 22(5):1				filler, F	Richard J.; A	ggregates in	neurodegenerativ	e disease: crowd	s and power?;	Trends No	eurosci.	
		52.	Wagey, Drug R						les; Abnorm	alities of protein l	kinases in neuroc	legenerative di	scases; Pr	og. in	
		53.						d Polyglutar (1998).	mine Protein	Forms Nuclear Ir	clusions and Ca	uses Neural De	generatio	n in	
		54.								protein 40 (HDI Proc. Natl. Acad				1	
		55.	Xu, W. Ubiqui	et al	l.; Rep	gulatio gating	on of M Enzyn	licrophthalm ne hUBC9; E	nia-Associate Exp. Cell. Re.	d Transcription F s. 255:135-143 (2	actor MITF Prot	ein Levels by A	Associatio	n with the	
		56.	Yaman Cell; 10					of Neuropa	thology and i	Motor Dysfunctio	on in a Condition	al Model of H	intington'	s Disease;	
		57.	Yenari, 44:584				ene The	rapy with H	SP72 Is Neu	roprotective in Ra	at Models of Stro	ike and Epileps	y; Ann. λ	leuroj.	
V		58.		-Par	t I: Ta	ırget I				lar and Molecula ses to Gene Thera	• .	-	•		
Am	D	59.	Zoghbi, 9:566-5)rr, Har	ry T.; Polyg	lutamine dise	ases: protein cles	wage and aggreg	ation; Curr. O	pin. In Ne	urobiol.	
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		士								Protect Brain" ANNUALS OF NEU						
				CYR,	D.M.	, et al	"Reg	ulatio	n of Hsp70 F	unction by a Eukaryotic DnaJ Homo 15, 1992, pp. 20927-20931				CICAL		
	′			DOU	GLAS	M. C	YR, "	Соор		molecular chaperone Ydj1 with spec	ific Hsp7() homologs to	suppress p	rotein		
₩		丁	_					_		liseases" NATURE, Vol. 392, March	199 8, pp	23-24				
AY	170			F. Ul RICH HARTI. "Molecular changements in cellular protein folding." NATURE, Vol. 381, 13 June 1996, pp. 571-580												

#11317521v1<|PT>-P-1492USI (#5317521).wpd Anne-Marie Falk 10/16/03

MARKET	Sheet 2 of 2								
Amg	TANG, Y., et al, "A Role for HDJ-2/HSDJ in Correcting Subnuclear Trafficking, Transactivation, and Transrepression Defects of a Glucocorticoid Receptor Zinc Finger Mutant" MOLECULAR BIOLOGY OF THE CELL., Vol. 8, May 1997, pp 795-809								
	LU, Z., et al, "The conserved Carboxyl Terminus and Zinc Finger-like Domain of the Co-chaperone Ydj1 Assist Hsp70 in Protein Folding" THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 278, No. 10, March 6, 1998, pp 5970-5978								
	BUKAU, B., et al, "The Hsp70 and Hsp60 Chaperone Machines" CELL, Vol. 92, pp 351-366, February 6, 1998								
	GLOVER, J.R., et al, "Hsp104, Hsp70, and Hsp40: A Novel Chaperone System that Rescues Previously Aggregated Proteins" CELL, Vol. 94, pp 73-82, July 10, 1998								
	BUSH, K.T., et al, "Protessome Inhibition Leads to a Heat-shock Response, Induction of Endoplasmic Reticulum Chaperones, and Thermotolerance" THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 272, No. 14, April 4, 1997, p 9086-9092								
	HENRY L. PAULSON, "Human Genetics '99: Trinuletide Repeats Protein Fate in Neurodegenerative Proteinopathies: Polyglutamine Diseases John the (Mis)Fold" AM. J. HUM. GENET., 1999, 64:339-345								
	ALVES-RODRIGUES, A., et al, "Ubiquitin, cellular inclusions and their roll in neurodegeneration" TRENDS NEUROSC (1998) 21, 516-520								
	BURRIGHT, E.N., et al, "SCA1 Transgenic Mice: A Model for Neurodegeneration Caused by an Expanded CAG Trinucleotide Repeat" CELL, Vol. 82, pp 937-948, September 22, 1995								
	AARON CIECHANOVER, "The ubiquitin-proteasome pothway: on protein death and cell life" THE EMBO JOURNAL, Vol. 17, No. 24, pp 7151-7160, 1998								
	PAULSON, H.L., et al, "Intranuclear Inclusions of Expanded Polyglutamine Protein in Spinocerebellar Ataxia Type 3" NEURON, Vol. 19, pp 333-344, August, 1997								
	SKINNER, P.J., et al, "Ataxin-1 with an expanded glutamine tract alters nuclear matrix-associated structures" LETTERS TO NATURE, #21, #1834 pp 971-974								
	STENOIEN, D.L., et al, "Polyglutamine-expanded androgen receptors form aggregates that sequester heat shock proteins, proteasome components and SRC-1, and are suppressed by the HDJ-2 chaperone" HUMAN MOLECULAR GENETICS, 1999, Vol. 8, No. 5, pp 731-741								
	DiFIGLIA, M., et al, "Aggregation of Huntingtin in Neuronal Intranuclear Inclusions and Dystrophic Neurites in Brain" SCIENCE, Vol. 277, 26 September 1997, pp 1990-1993								
	CHERNOFF, Y.O., et al, "Role of the Chaperone Protein Hsp104 in Propagation of the Yeast Prion-Like Factor [psi*]" SCIENCE, Vol. 268, 12 May 1995, pp 880-883								
	MARBER, M.S., et al, "Overexpression of the Rat Inducible 70-kD Heat Stress Protein in a Transgenic Mouse Increases the Resistance of the Heart to Ischemic Injury" J. CLIN. INVEST., Vol. 95, April 1995, pp 1446-1456								
	SATO, K., et al, "HSP70 is essential to the neuroprotective effect of heat-shock" BRAIN RESEARCH 740 (1996) 117-123								
	CHEETHAM, M.E., et al, "Human homologues of the bacterial heat-shock protein DnaJ are preferentially expressed in neurons" BIOCHEM. J., (1992) 284, 469-476 DebBURMAN, S.K., et al, "Chaperone-supervised conversion of prion protein to its protease-resistant form" PROC. NATL. ACAD. SCI. USA, Vol. 94, pp 13938-13943, December 1997								
	ZHOU, M., et al, "Evidence That a Rapidly Turning Over Protein, Normally Degraded by Proteasomes, Regulates hsp72 Gene Transcription in HepG2 Cells" THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 271, No. 40, October 4, 1996, pp 24769-24775								
	WARRICK, J., et al., "Suppression of polyglutamine-mediated neurodegeneration in <i>Drosophilia</i> by the molecular chaperone HSP70" Nature Genetics 2, Vol. 23 (1999)								
V^-	Bruening, W., et al., "Up-Regulation of Protein Chapcones Preserves Viability of Cells Expressing Toxic Cu/Zn-Superoxide Dismutase Mutants Associated with Amyotrophic Lateral Sclerosis", J. Neurochem. Vol. 72, No. 2, 1999								
Ama	Chai, Y., et al., "Analysis of the Role of Heat Shock Protein (HSP) Molecular Chaperones in Polyglutamine Disease", J. Neurosci. 19(23):10338-10347 (1999)								
EXAMINER An	ne-Marie Falk DATE CONSIDERED 10/16/03								
	citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in								

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